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DEPENDENCE OF WOOL PRODUCTIVITY ON GENDER AND CONSTITUTION IN THE CONDITIONS OF USTYURT PLATEAU PASTURE

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ABSTRACT: This article examines the wool productivity characteristics of Camelus bactrianus, Camelus dromedarius camels and their hybrids in relation to their sex and constitution, considering the environmental conditions of the Ustyurt Plateau. The study discusses and draws conclusions about the differences in wool productivity based on the animals' sex and constitution.

Keywords: Ustyurt Plateau, Camelus bactrianus, Camelus dromedarius, hybrids, wool productivity, sex, constitutional differences, conclusions.

INTRODUCTION

Today, the main camel breeding countries in the world and the leaders in the field include Australia, Argentina, Namibia, South Africa, Mongolia, India and China. In these countries [4.B. 4.https://agriexpert.ru]. According to FAO (2023), more than 50 breeds of Camelus dromedarius camels and 7 breeds of Camelus bactrianus camels have been created. Many scientific studies have been conducted in the world to improve the selection methods and genotypic characteristics of one- and two-humped camels to increase their productivity. At the same time, wool products obtained from camel breeding are of great importance in today's demand, and the directions of increasing the quantity and quality of camel wool and developing modern technologies for processing wool products remain relevant [1.B.128]. [2.B.120].

Among the CIS countries, the Republic of Kazakhstan is currently the leader in camel breeding, with a population of 227 thousand heads. In the Russian Federation, it is 6.4 thousand heads (in the Republic of Tuva), and the republics of Turkmenistan are in the lead. A lot of research is being conducted on the selection, maintenance and feeding of the Kazakh Bactrian camel breed in the Republic of Kazakhstan,

the Kalmyk two-humped camel breed in the Russian Federation, and the Turkmen Arvana camel breed [5.B. https://24.kz/ru/news.ru].

Research purpose. To study the dependence of the wool productivity characteristics of Camelus dromedarius and Camelus bactrianus camels on the sex and constitution in the conditions of the Ustyurt Plateau of the Republic of Karakalpakstan.

Research tasks. Determination of wool productivity characteristics in the constitution and sex of camels of Camelus bactrianus, Camelus dromedarius and their hybrids.

The object of the research was the constitution and sex of wool productivity indicators of Camelus bactrianus, Camelus dromedarius and their hybrids of different birth ages.

The subject of the research was wool productivity, the type of camels, constitution, sex.

Research methods. In carrying out scientific research, generally accepted methods in zootechnics were used to determine wool productivity. N.A.Plokhinsky's methods of determining "Arithmetic mean value (X), its error (S_x), coefficient of variation (S_v)" were used.

RESULTS AND DISCUSSION

In our experimental work, the wool productivity characteristics of the constitution and sex of camels of Camelus bactrianus, Camelus dromedarius and their hybrids were studied, and the experimental results obtained are summarized in Table 1 below.

Table 1

Dependence of wool productivity on gender and constitution

Camel breeds and their hybrids	Gender	**Constitution**		
		Coarse	Strong	Thin
		X± Sx		
Camelus bactrianus	♂	5,2±0,37	4,9±0,42	4,6±0,32
	♀	4,9±0,32	4,6±0,41	4,4±0,30
Camelus dromedarius	♂	3,2±0,31	3,0±0,29	2,8±0,23
	♀	2,9±0,22	2,6±0,18	2,4±0,21
Heterosis 2/1	♂	4,7±0,36	4,3±0,36	3,9±0,36
	♀	4,4±0,29	4,0±0,32	3,6±0,34

From the data summarized in Table 1, it can be said that, depending on the constitution of Camelus bactrianus camels, the average weight of male animals of the coarse type was 5.2±0.37 kg, while that of the robust type was 4.9±0.42 kg, and that of the slender type was 4.6±0.32 kg, while that of the females was 4.9±0.32 kg, 4.6±0.41 kg, and that of the males was 4.6±0.32 kg, respectively.

This figure is based on the constitution of Camelus dromedarius camels, and the average weight of male animals of the coarse type was 3.2±0.31 kg, while that of the robust type was 3.0±0.29 kg, and that of the slender type was 2.8±0.23 kg, while that of the females was 2.9±0.22 kg, respectively. 2.6±0.18 kg and 2.4±0.21 kg.

In terms of wool productivity in hybrids, male animals of the coarse type were 4.7±0.36 kg, while in the strong type they were 4.3±0.36 kg and in the thin type they were 3.9±0.36 kg, and in the female animals these figures were 4.4±0.29 kg; 4.0±0.32 kg and 3.6±0.34 kg, respectively.

In conclusion, it can be said that in the sexual dimorphism of camels, the dominance of male wool camels was preserved in Camelus bactrianus, Camelus dromedarius and Hybrids, while the dominance of the coarse type Camelus bactrianus over the strong type camels was 5.8% and over the thin type camels was 11.6%. This situation was 6.2% and 12.5%, respectively, in Camelus dromedarius camels. Hybrid camels occupied an intermediate position, showing heterosis compared to Camelus dromedarius camels, with a predominance of coarse types by 46.8%, 65.4% and 39.3%.

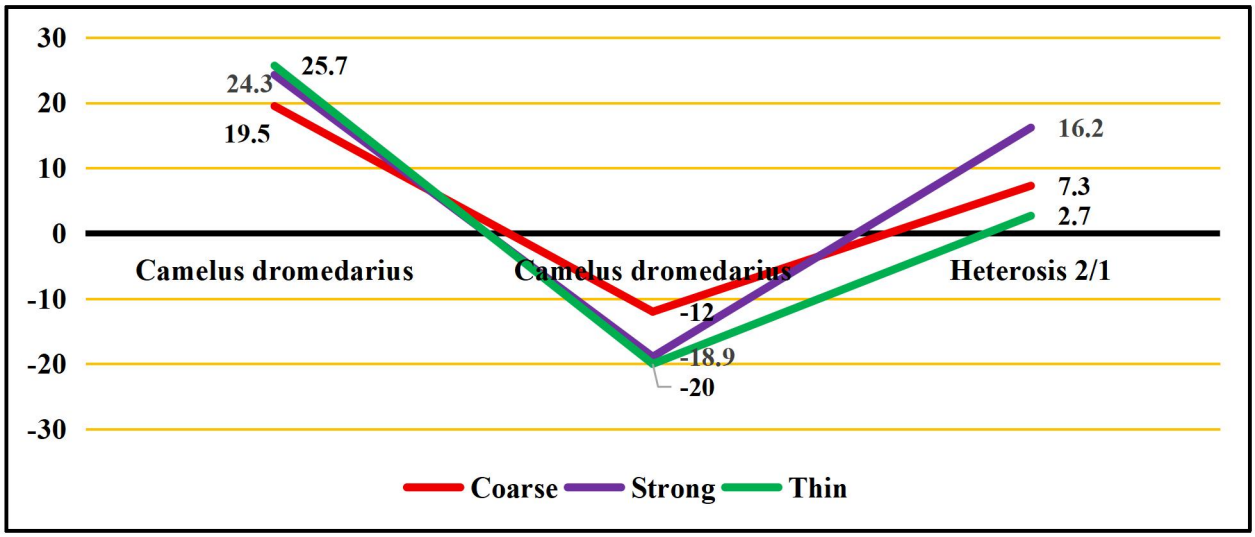

Figure 1. Difference in wool productivity of all breeds and their hybrids of males in the pasture conditions of the Ustyurt Plateau compared to the average, %

In general, animals of coarse constitution types showed high wool productivity in all breeds and hybrids. In this case, camels with a solid type occupied an intermediate position. It was proved that the wool productivity of camels of the thin type was lower in all sexes than in other constitution types.

In sexual dimorphism, male camels prevail in the difference in wool productivity, and this difference was aimed to be studied.

A comparison of the wool productivity of all breeds and their hybrids in the grazing conditions of the Ustyurt Plateau compared to the average indicator across breeds is presented in Figure 1 below.

The data presented in Figure 1 show that in the Ustyurt Plateau pasture conditions, the wool productivity of all male breeds and their hybrids compared to the average indicator was higher than the

average in animals of the coarse type by 19.5%, in animals of the strong type by 24.3%, and in animals of the thin type by 25.7%.

The wool productivity of Camelus dromedarius camels was lower than the average in animals of the coarse type by 12.0%, in animals of the strong type by 18.9%, and in animals of the thin type by 20.0%.

Hybrid camels occupied an intermediate position, accounting for 7.3%; 16.2%, and 2.7%, respectively.

It can be strongly noted that hybrid camels exhibited a certain degree of heterosis in wool productivity, achieving higher yields than Camelus dromedarius camels, and this information can be seen in Figure 2 below.

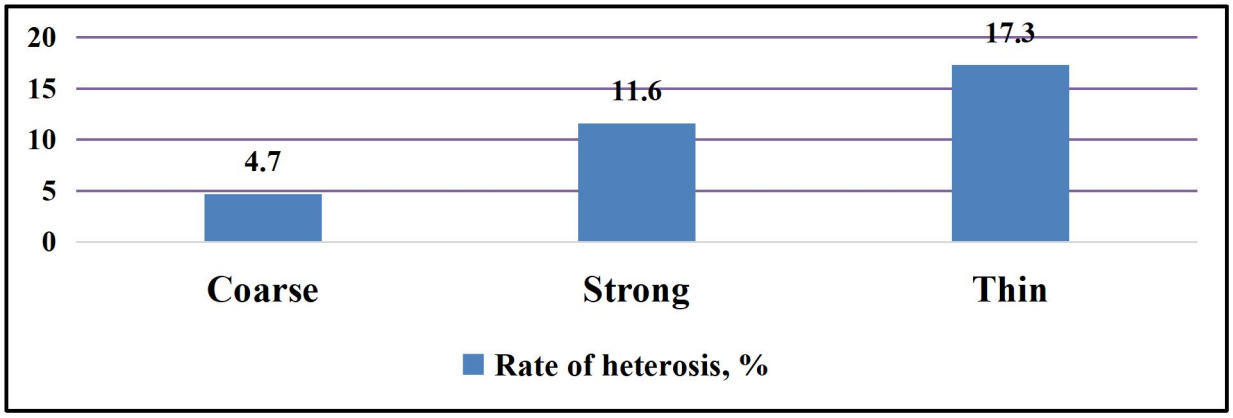

Figure 2. Heterosis rate of hybrid 2/1 generations compared to Camelus dromedarius camels, %

From the data presented in Figure 2, it can be seen that the heterosis of the coarse type of hybrid camels was 4.7% higher than that of the Camelus dromedarius camels, 11.6% higher in the robust type, and 17.3% higher in the thin type.

CONCLUSION

It was observed that the heterosis was less pronounced in the coarser constitution of the camels, and vice versa, the heterosis was more pronounced in the hybrid offspring obtained towards the thinner one.

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